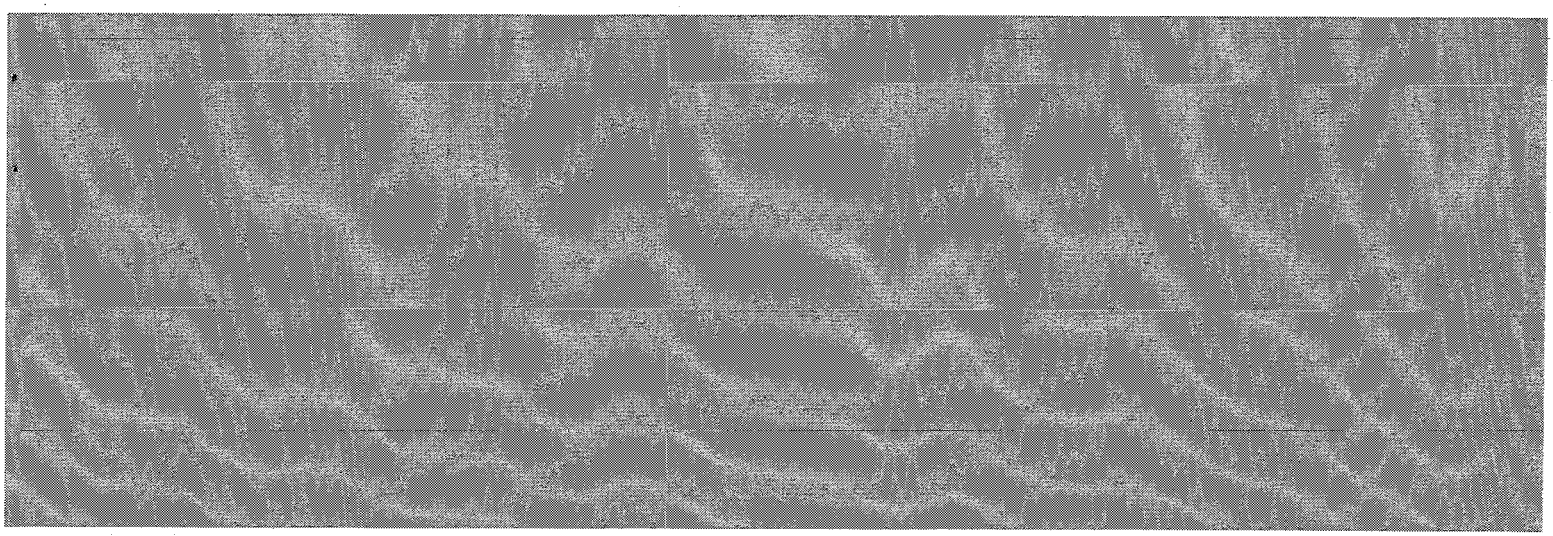
LG

WASHING MACHINE SERVICE MANUAL

CAUTION
READ THIS MANUAL CAREFULLY TO DIAGNOSE TROUBLES CORRECTLY BEFORE OFFERING SERVICE.

MODEL : WD-1021WF / WD-1041WF
WD-1021WFH / WD-1041WFH
WD-1022X / WD-1042X
WD-1022XH / WD-1042XH
WD-1045F / WD-1045FH



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1. SPECIFICATION

ITEM		WD-102(4)1WF(H)	WD-102(4)2X(H)
POWER SUPPLY		AC 220-240V / 50Hz	
PRODUCT WEIGHT		67kg	
ELECTRICITY CONSUMPTION	WASHING	190W	
	SPIN(normal)	300W	
	DRAIN MOTOR	32W	
	WASH HEATER	2000W	
REVOLUTION SPEED	WASH	45rpm	
	SPIN	600/800/1000rpm	
OPERATION WATER PRESSURE		0.3-10kgf/㎠ (30-1000kPa)	
CONTROL TYPE		Electronic	
WASH CAPACITY		7.0kg	6.0kg
		Wool(2kg), Synthetic(4.0kg), Delicate(3.0kg)	
DIMENSION		600mm(W) × 600mm(D) × 850mm(H)	
WASH PROGRAM		Coloreds,Whites,Rapid,Synthetic,Wool,Delicate	
RINSE PROGRAM		Normal,Super,Normal+Rinse Hold,Super+Rinse Hold	
SPINNING NOISE(dBA)		52 (at 800rpm)	
DOOR SWITCH TYPE		Automatic type by pressing the button	
WATER LEVEL		9 Step(by sensor)	
RESERVATION		From 3 hour to 19 hour	
SENSING OF THE LAUNDRY AMOUNT		Adopt	
FUZZY LOGIC		Adopt	
DISPLAY OF THE REMAINING TIME		Adopt	
DIAGNOSIS ERROR		7 ITEMS	
POWER AUTO OFF		Adopt	

2. FEATURES & TECHNICAL EXPLANATION

2-1.FEATURES

- **LOW TANGLE AND LOW DAMAGE.**
  Drum washing machine have uniform washing without damage and tangle by rubbing and beating.

- **ADOPT FUZZY LOGIC.**
  FUZZY denote that MICOM can set the optimal washing process by sensing laundry amount and temperature of ambience and water.

- **LOW-NOISE.**
  Low-noise washing and spinning is accomplished by adopting electronic motor control.

- **LIGHT-WEIGHT.**
  By reducing the weight of system dramatically to 67kg, it is easy to handle.

- **RESERVATION. (DELAYED START)**
  If necessary, the reservation time for washing can be set up by controlling the (TIME DELAY) button.

- **EASY CHECK OF THE WATER TEMPERATURE IN WASHING.**
  Water temperature is displayed by pressing the selection (WATER TEMP) button on washing.

- **WHEN THE SETTING TEMPERATURE IS OVER 60℃.**
  Washed water is gradually decreased by repeating WATER INLET-RINSE-DRAIN to prevent the laundry from damage by water temperature sudden change.

- **POWER SHOWER RINSE.**
  The front of door sprays out the water to remove the remaining detergent with just a little amount water.

- **PREFERRED TEMPERATURE SELECTION.**
  Selected temperature from cold to heating(4 steps).

- **CHILD-LOCK.**
  The Child-Lock system has been developed to prevent children from processing any button to change the program during operation.

- **RINSE HOLD.**
  If you desire to leave your synthetic and wool fabrics in the machine after the wash program you may select the (RINSE HOLD) function to prevent them from getting wrinkled.

- **Auto Restart**
  Although the washing machine is turned off by a power failure, it restarts automatically in its stopped again and the process is properly adjusted and it will be the same when the machine unplugged in operation is plugged in again.

2-2.SENSING THE LAUNDRY AMOUNT

- PRINCIPLE : After the first water supply, the laundry absorbs the water with the revolution of drum, which causes the decrease of water level.
  Micro-Processor senses decreased water level and makes water to be supplied more and recognizes he amount of the laundry by calculating the times of complementary water supply.

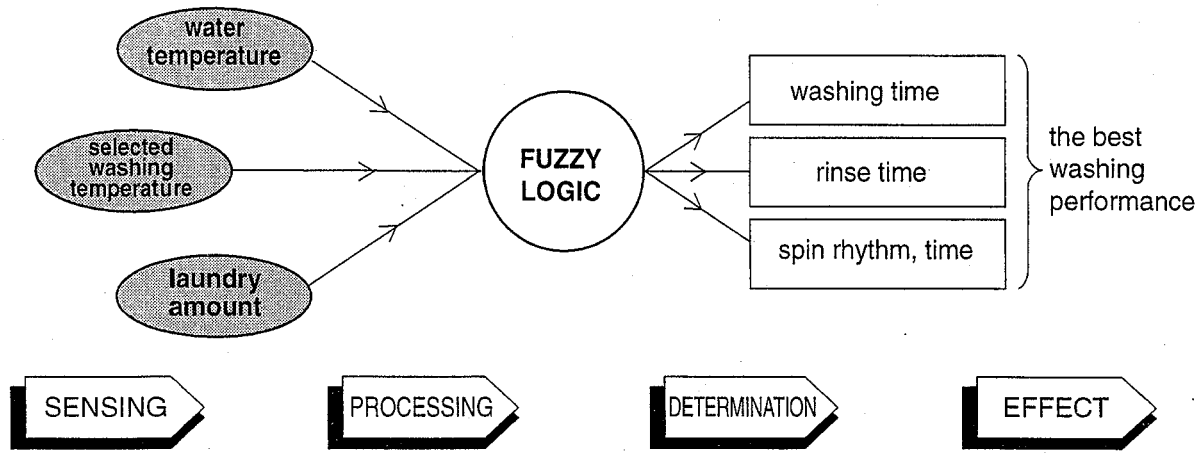
- Criteria :

AMOUNT OF LAUNDRY	TIMES OF COMPLEMENTARY WATER SUPPLY
below 2.0㎏	1~2 times
above 4.5㎏	3 times or more

※ The times of water supply depends on amount of laundry, material of laundry and water temperature etc.

2-3.DETERMINE WASHING TIME BY FUZZY LOGIC

To get the best washing performance optimal time is determined by sensing of water temperature, selected washing temperature and laundry amount.



2-4.WATER LEVEL CONTROL

- This model adopts a pressure sensor which can sense the water level in the tub.
- When the water level reaches to the preset level water supply is stopped, then washing program proceeds.
- Spinning does not proceed until the water in the tub reduces to a certain level.

2-5.CONTROL OF DOOR OPEN

- The door can be opened by pressing (DOOR OPEN) button after finishing program.
- When the revolution of drum is stopped and in case water level is below level 2, door can be opened by pressing the (DOOR OPEN) button.
- If there is no power, the door can be opened by revolving the door opener.
  (If the water level is high, first drain the water by pulling out the hose cap)

2-6.IN CASE OF NOT OPEN THE DOOR

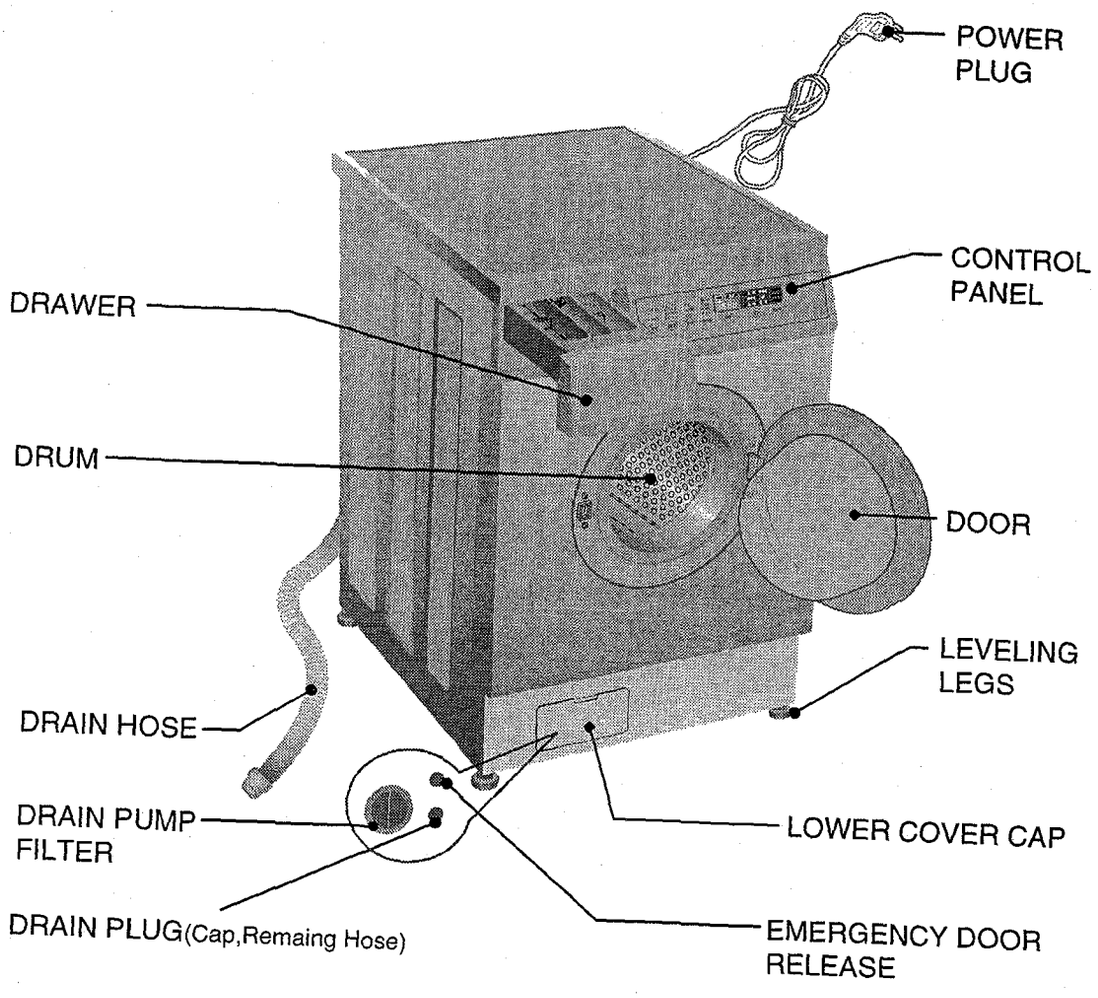
- Power is off or unplugged.
- Program is operating.
- (DOOR LOCK)

light turn on.
- Motor(Drum) is spinning(Rotating).

2-7.WHEN ⌜DOOR LOCK⌟ LIGHT TURNS ON

- Water level frequency is below 23.2kHz.(Water level is high)
- Water temperature in the tub is above 45℃

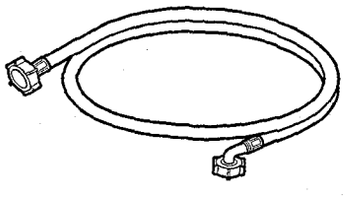
3. PARTS IDENTIFICATION



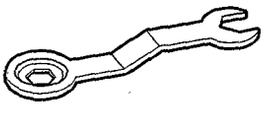
■ ACCESSORIES

INLET HOSE

WD-1021WF/1041WF/1022X/1042X (1EA)
WD-1021WFH/1041WFH/1022XH/1042XH (2EA)



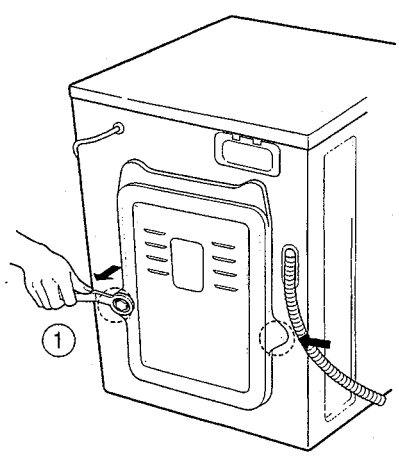
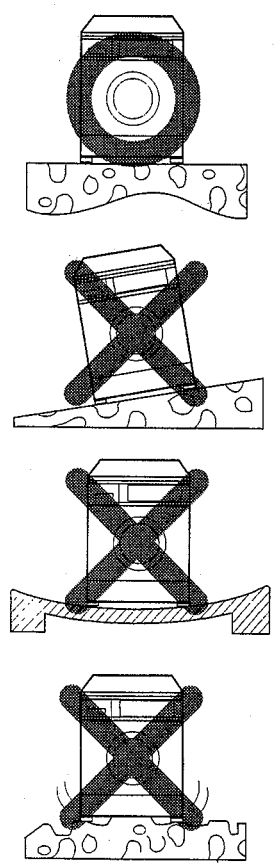
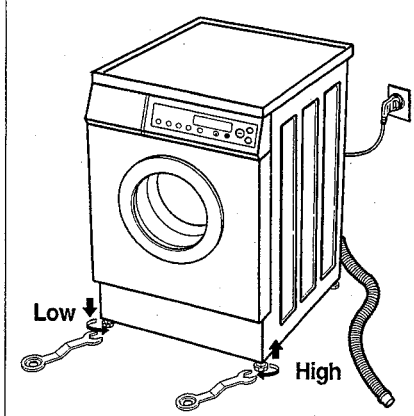
SPANNER



4. INSTALLATION

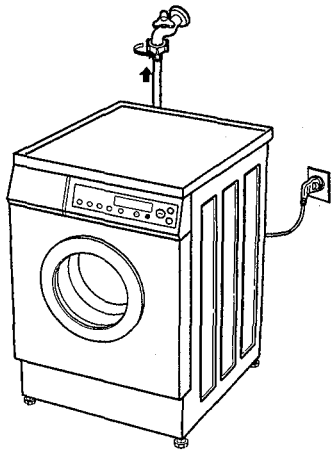
1 Before servicing ask troubles of customers
2 Check the adjustment(power supply is 220-240V, remove the transit bolts....)
3 Check the troubles referring to the trouble shooting.
4 Decide Service steps referring to disassembly instructions.
5 And then, service and repair.
6 After servicing, operate the appliance whether it works O·K or NOT.

■ STANDARD INSTALLATION
The appliance should be installed as follows.

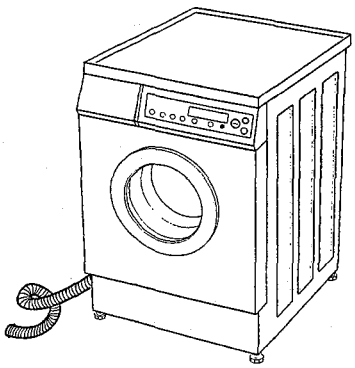
REMOVE THE TRANSIT BOLTS	INSTALL THE APPLIANCE ON FLAT AND FIRM SURFACE	ADJUST THE HORIZONTAL
• Remove the transit bolts (4EA:①)with supplied spanner. • Keep the transit bolts and spanner for future use. 		• Turn the leveling feet to set the appliance horizontally.  • The appliance goes up by rotating the feet clockwise. • The appliance come down by rotating the feet counter clockwise.

■ HOW TO CONNECT INLET HOSE

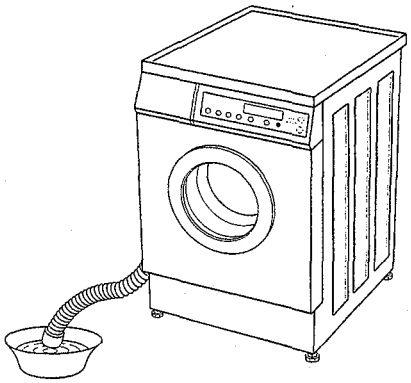
- Check that the rubber packing is inside of the valve connector.
- Connect the inlet hose firmly to prevent leak.



■ CONNECT DRAIN HOSE



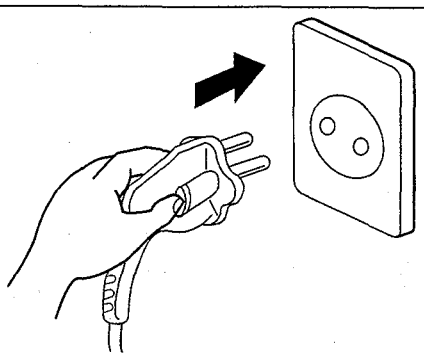
· Make sure that the hose is not twisted.



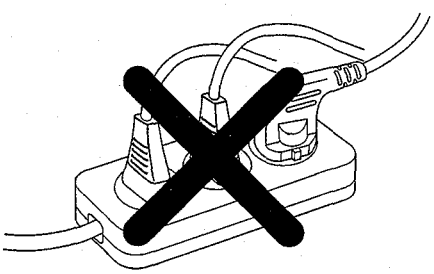
· Avoid submerging the end of the hose.

※ The drain hose should be placed under 85㎝ from the floor.

■ CONNECT POWER PLUG



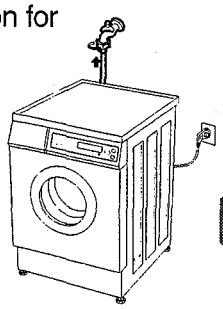
· Connect the power plug to the wall outlet.



· Avoid connecting several electric devices, It may be the cause of the fire.

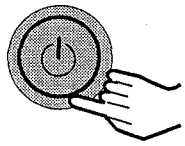
7 TEST OPERATION

1 Preparation for washing.



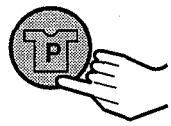
- Connect the power plug to the outlet.
- Connect the inlet hose.

2 Press the POWER ( ) button.



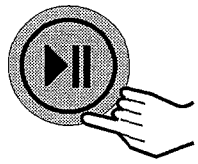
· In case of coloreds program.

3 Press the PROGRAM ( ) button.

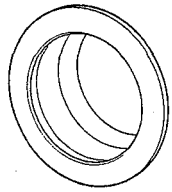


· In case of coloreds program.

4 Press the (START/PAUSE) ( ) button.

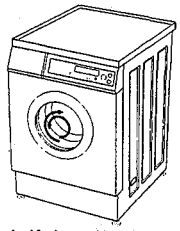


5 Check the water supply.



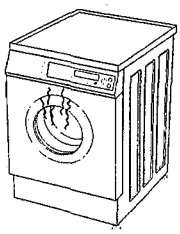
· Check shower because the water supplied on the door at first.

6 Check automatic reverse turn.



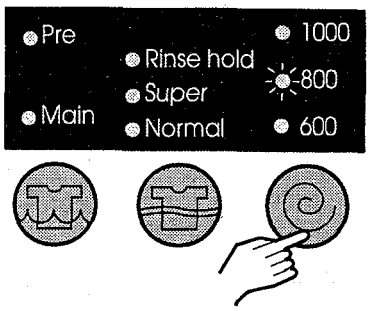
· Check if the drum rotates to clockwise and counterclockwise.

7 Check the water heating.

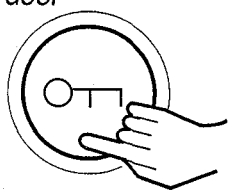


· Press the button (WATER TEMP) ( ) and then the present temperature will be displayed.

8 Check the drain and spin

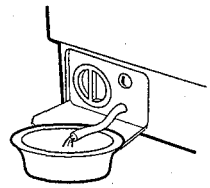


9 Power off and open the door



· After power off, press the DOOR OPEN ( ) button to check the door open.

10 Water removal



· If SVC is needed during check , remove the remaining water by pulling out the drain plug.

- Trouble shooting refer to (6.ERROR DISPLAY)
- Assemble and disassemble refer to (9.Disassembly Instructions)

5. OPERATION

Rinse hold

- Rinse hold function can be selected by pressing the rinse( ) button, and rinse hold lamp turns ON.
- Selection rinse hold washer waits without drain / spinning after rinse.
- To drain and spin, press rinse ( )button, rinse hold lamp turns off and drain / spinning starts.

Displaying abnormal operation

- Display the remaining time(Hour : Minute)
- The remaining time is reduced by the washing cycle.
- Error lamp is indicated the abnormal operation.

(dE, FE, PE, CE, LE, SE, bE)

- Display the reservation time.

How to select a program

- 6 programs can be selected by the kind of the laundry.
- By pressing the program ( ) button, [Coloreds→ Whites→Rapid→Delicate→Wool→Synthetic] can be selected.

Error display

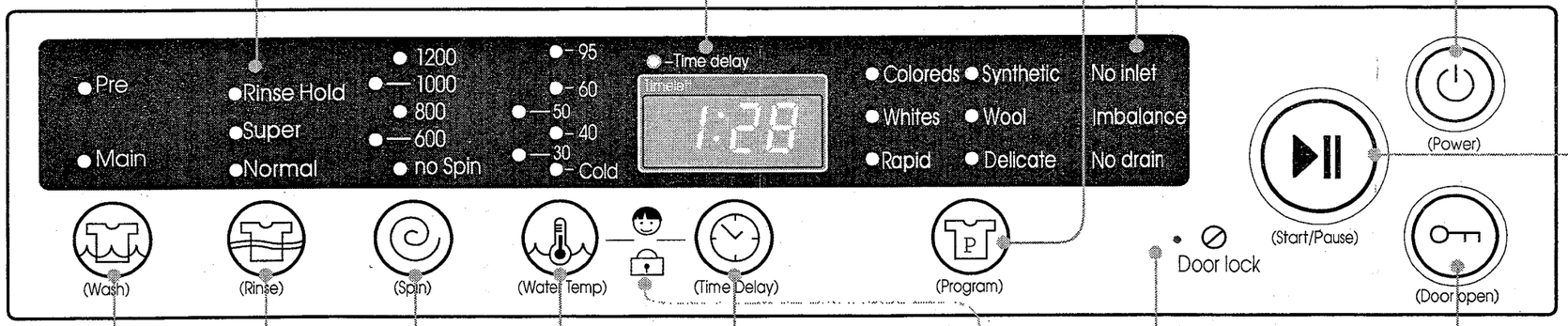
- The display blinks if there is an error
- No inlet : Trouble with water supply
- Imbalance : The laundry is tilted to one side
- No drain : The drain filter is clogged or the drain pump is out of order.

Power button

- By pressing the button, it repeats turning on and off.
- Press the button to cancel the time delay.
- It turns off in 8 sec. after the program is finished.

For manual wash, rinse and spin

- Use these buttons to change washing method, rinse method spinning speed.
- When lamp is off, no selection has been made.
- Prewashing is available for coloreds, whites, synthetic program.



Start/Pause button

- Use the button to start or pause wash cycle.
- The power turns off automatically in 4 minutes after the pause button is pressed.
- Press the button to change the program.

How to select water temperature

- Press the button to select water temperature.
- The water temperature can be selected [40°C → 50°C→ 60°C→Cold→ 30°C] during coloreds and synthetic programs.
- 95°C is selected only for whites program.
- By pressing the button during operating the present temperature is displayed.

How to use delayed washing

- Press the button when reservation washing is needed.
- When the button is pressed,「 3:00 」is displayed. A maximum delay of「 19:00 」 hours can be set.
- Whenever pressing it, one hour increases.
- [Time delay] the power ( ) button to cancel it.
- [Time delay]means the time required from the present to the completion of washing.

Child-Lock

- Once Child-Lock is set, all buttons are inoperable during operation.
- The Child-Lock system can be set at any time even including during Power Off, on Pause and operation. It is automatically cancelled when an operational error occurs and when the cycle ends.
- When power is off, the LED indicates[CL] only. During operation, or when the program paused the LED Will indicate[CL]and the remaining time.

Door lock display

- It shows whether the door can be open or not during the washing cycle.
- If the lamp is off, the door can be opened.

How to open the door

- Use the button to add the laundry.
- Press the button to open the door.
- Only operates when the power plug is connected to 220~240 outlet.

* Water Supply : W.S　　* Intermittent Spin : I.S　　* Disentangle : D.T

COURSE / STEP	Washing										Rinse														Spin			END	Auto off	Normal Working Time (Hour:Minute)
	Pre				Main						Normal(Hold)												Extra(Hold)								
						Washing		Staycooling			1				2				3				4								
	W·S	Washing	Drain	I·S	W·S	Heating	Washing	W·S	Rinsing	Drain	Drain	I·S	W·S	Rinsing	Drain	I·S	W·S	Rinsing	Drain	I·S	W·S	Rinsing	Drain	I·S	W·S	Rinsing	Drain	Spin	D.T			
STEP	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	30	
Time (SEC)	120	Min	60	240	120		Min	120	60	60	60	240	120	180	60	240	120	180	60	240	120	180	60	240	120	180	60	480	120	20	20	
Coloreds																																About 1:46
Whites																																About 2:23
Rapid																																About 43
Delicate																																About 1:09
Wool																																About 45
Synthetic																																About 1:46
Washing																																About 1:08
Rinsing																																About 28
Rinse hold																																About 28
Spin																																About 11
Washing + Rinsing																																About 1:36
Washing + Spin																																About 1:13
Rinsing + Spin																																About 38

* ▬▬▬ Basic Cycle

* ▭▭▭ Optional Cycle

* Pre-Setting Time : Water Supply – 120 sec.
Drain – 60 sec.

* ~Time for varies as the temperature or the amount of laundry

* For Wool or Delicate course only 650 rpm is operated

* Shower Rinsing : Rinsing time is 20 sec

* Base time is minute in washing chart

* The actual program time can be varied with the load amount, water temperature or ambient temperature.

7. TROUBLE SHOOTING

7-1.BEFORE SVC CHECKING

- Be careful of electric shock or disconnecting the parts while trouble shooting.
- Voltage of each terminal in AC 220-240V and DC while applying an electric current.

7-2.QC TEST MODE.

① Pressing RINSE( ), and SPIN ( )button simultaneously.

② Power supply ON with pressing upper two button. then buzzer sound twice.

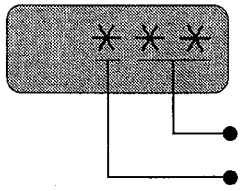
③ Press the START/PAUSE ( )button as follows.

[Press the START/PAUSE ( )button more 4 times until stop spinning]

	Checking Point	Display Status
None	All lamps turn on	18:88
1 time	Counterclockwise spin	3~6 (Drum rpm ÷ 10)
2 times	Low speed Spin	55~65 (Drum rpm ÷ 10)
3 times	High speed Spin	95~105 (Drum rpm ÷ 10)
4 times	Inlet valve for pre-wash operation	Water level frequency(25~65)
5 times	Inlet valve for main-wash operation	Water level frequency(25~65)
	(Hot inlet valve in case of hot water fill)	
6 times	Inlet valve for main-wash operation	Water level frequency(25~65)
7 times	Clockwise spin	3~6 (Drum rpm÷ 10)
8 times	The Heater is in operation for 3 sec.	Water Temperature
9 times	Draining pump operation	Water level frequency
10 times	Auto off operation	

7-3.HOW TO KNOW THE WATER LEVEL FREQUENCY

* Press the WASH ( ) and RINSE ( ) button simultaneously.



- The last two digits means water level frequency(10^{-1} KHz)
- The first digit means how many times water has been supplied.

ex) 641 : Water level frequency = 241 × 10^{-1} KHz ('2' is ommitted)

└► Water is supplied 6 times.

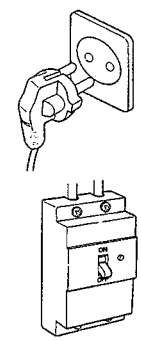
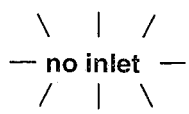
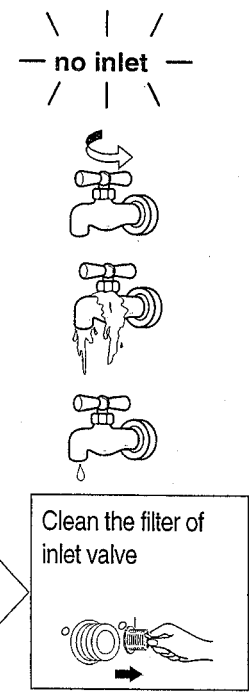
7-4.ERROR DISPLAY.

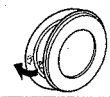
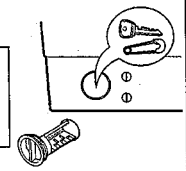
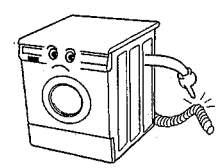
- If you press the [Start/Pause] ⏯ button in error condition, any error except **'PE'** will disappear and the machine will change into pause status.
- In case of 『**PE**』, 『**tE**』, 『**dE**』, if the error is not resolved within 20 sec., and in case of other errors, if the error is not resolved within 4 min., power will be turned off automatically and the error only will be blinked. But in case of 『**FE**』, power will not be turned off.

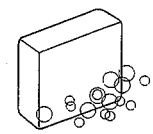
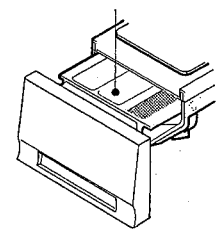
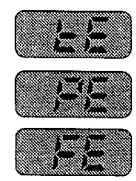
	ERROR	SYMPTOM	CAUSE
1	WATER INLET ERROR	\ | / — **no inlet** — / | \	o Water has not reached to the pre-set level within 4 min. since inlet valve operated or water has not reached to the normal level within 25 min.
2	IMBALANCE ERROR	\ | / — **imbalance** — / | \	o The appliance is tilted. o Laundry is gatherd to one side. o Non distributable things are put into the drum.
3	DRAIN ERROR	\ | / — **no drain** — / | \	o Water has not drained enough within 5 min.
4	OVER FLOW ERROR		o Water is automatically being pumped out because too much water is in the tub.
5	SENSOR PRESSURE S/W ERROR		o The sensor pressure switch is out of order.
6	DOOR OPEN ERROR		o The [Start/Pause] ⏯ button is pressed with the door open. o The door switch is out of order.
7	HEATING ERROR		o The thermistor is out of order.

8. ERROR DIAGNOSIS AND CHECK LIST

8-1.DIAGNOSIS AND ANSWER FOR ABNORMAL OPERATION

<table>
<tr><th>SYMPTOM</th><th>GUIDE FOR SERVICE CALL</th></tr>
<tr><td>NO POWER</td><td>Is the power plug connected firmly to AC220-240V outlet?
YES
Power failure? or Breaker opened?
NO
Visit to check
  </td></tr>
<tr><td>Water inlet trouble
  </td><td>Is "no inlet" displayed?
YES
Is the tap opened?
YES
Isn't the tap frozen?
NO
Isn't the water supply shut-off?
NO
Isn't filter in the inlet valve clogged with foreign material?
YES
Clean the filter of inlet valve
NO
Visit to check
  </td></tr>
</table>

SYMPTOM	GUIDE FOR SERVICE CALL
◦ Door open trouble ◦ Error displayed on the program 	When the door opened, Is the started or on the program「 TIME DELAY」 ? **YES** → Close the door  **NO** Didn't you press the DOOR OPEN ( ) button when water remained in the tub? **YES** → 1. Press the START/PAUSE ( ) button to stop the appliance. 2. Drain water by selecting spin. 3. Open the door by pressing the DOOR OPEN( ) button. **NO** Isn't door opened in spite of pressing the DOOR OPEN ( ) button **NO** Visit to check **〈Check if the door switch is O · K.〉**
◦ Drain Trouble \ | / — no drain — / | \	Is "no drain" displayed? **YES** Is the foreign material clogged in the drain pump filter such as pin, coin and etc.? **YES** → Clean up the filter. **NO** Is the Drain Hose frozen with water, kinked or cursched? **NO** Visit to check \ | / — no drain — / | \  

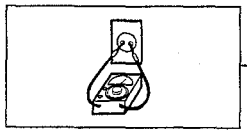
SYMPTOM	GUIDE FOR SERVICE CALL
◦ Lather overflow from the appliance. (In this condition, wash and spin do not operate normally)	Is Low-lathering detergent for the drum washing machine used? YES Is the proper amount of detergent used as recommended? YES Recommend to reduce the using amount of detergent.  LOW LATHERING DETERGENT * This appliance has the automatic suds sensing function which operates under much suds condition for good rinse and preventing overflow. * When much suds are sensed, suds removing fuction such as drain, water input and pause will operate without rotating the drum.
◦ No effect of softener	Is softener put in the correct compartment of drawer? YES Is the drawer closed during wash? YES Is the softener cap clogged? YES Explain how to use softener 〈**Clean the compartment for softener**〉 Compartment for softener 
◦ Error displayed as follows	Visit to check 

8-2.FAULT DIAGNOSIS AND TROUBLE SHOOTING

CAUTION

1. Be careful of electric shock or disconnecting the parts while trouble shooting.
2. First of all, check the connection of each part terminal with wiring diagram.
3. Voltage of each terminal is AC 220-240V while applying an electric current
   (except secondary part of the transformer and sensor pressure)

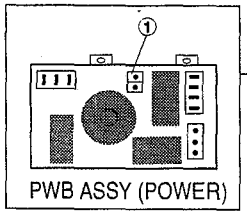
NO POWER



When measuring the voltage of the outlet, is the voltage AC 220-240V?

NO → Check the fuse?

YES ↓

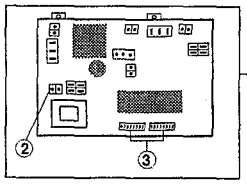


PWB ASSY (POWER)

When measuring the voltage of blue connector① of the PWB assy (Power) is the voltage AC 220-240V?

NO → Replace PWB assy (Power)

YES ↓



When the blue connector(②)is pulled out from the PWB assy(Main,) is the voltage AC 220V or more?

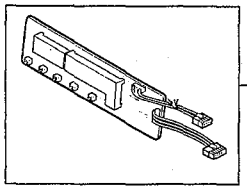
NO → Replace PWB assy(Main)

YES ↓

Is ③connector disconnected or is the contact bad?

YES → Reconnect and repair connector.

NO ↓



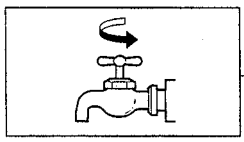
Is wire of the PWB assy(Display) disconnected or cut?

NO → Replace PWB assy(Main)

YES ↓

Replace PWB assy(Display) (6871FC2272E)

NO WATER SUPPLY

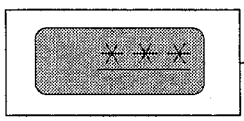


Is the water supply shut-off?

NO

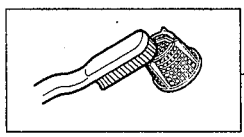
Is tap opened? **NO** → Open the tap.

YES



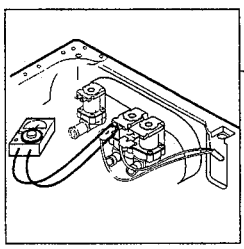
When you press both WASH( ) button and RINSE( ) buttons simultaneously, is the water level frequency below 40? **YES** → Check the chamber(Air) and the tube clogged with impurity.

NO



Is the inlet valve filter clogged with impurity? **YES** → Clean the filter.

NO

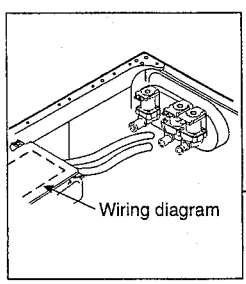


Is resistance of the inlet valve connector between 2 to 8 kΩ ? **NO** → Replace the inlet valve.

YES

Check the voltage between each terminal of inlet valve is AC 220~240V. (Refer to 7-2 TEST MODE) **NO** → Replace the PWB assy (Main).

DETERGENT DOES NOT FLOW IN

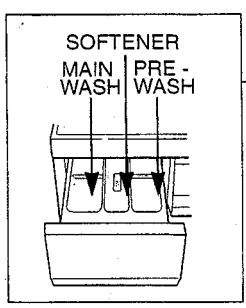


Is the water supplied? **NO** → Refer to solution 「no inlet」

YES

Are receptacles correctly connected to the therminals of inlet valve? **NO** → Check the wiring on the dispenser.

YES



Is detergent put in the correct compartment of the drawer? **NO** → Put the detergent in the correct position.

PRE+MAIN

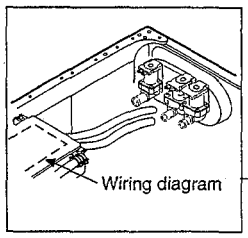
MAIN WASH

● : Detergent

YES

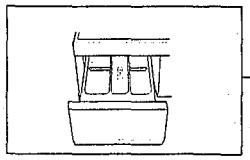
Is the detergent hardened? **YES** → Clean the drawer.

SOFTENER DOES NOT FLOW IN

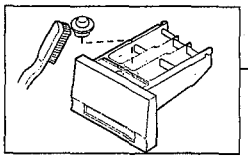


Is water supplied?
- NO → Refer to 「NO WATER SUPPLY」
- YES ↓

Are receptacles correctly connected to the terminals of inlet valve?
- NO → Check the wiring on the dispenser.
- YES ↓

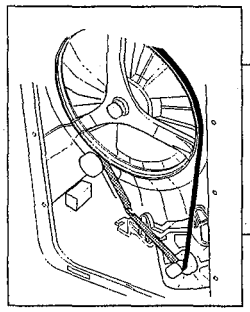


Is softener put in the correct compartment of drawer?
- NO → Put in the correct compartment.
- YES ↓



Is the softener cap clogged?
- YES → Clean the cap and drawer.

ABNORMAL SOUND

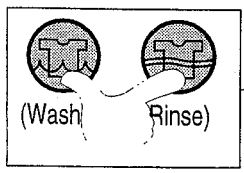


Is the pulley bolt loosened?
- YES → Fix the bolt tightly.
- NO ↓

Is the belt worn?
- YES → Replace the V-belt (4400FR3116A)
- NO ↓

Is there friction noise from the motor?
- YES → Replace the motor.

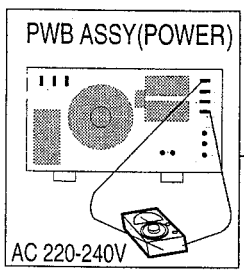
HEATING WITHOUT WATER



When pressing WASH ( ) and RINSE ( )buttons at the same time after draining, is the water level frequency 52 or more?
When pressing WASH ( ), RINSE ( ) buttons at the same time while wash, is the water level frequency between 20~40?

NO → Replace the sensor (pressure)

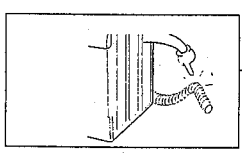
YES



Is the connector of PWB assy(Power) disconnected or disassembled?

NO → Replace the PWB assy (Main)

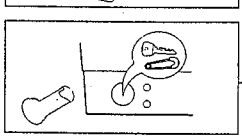
DRAIN MALFUNCTIONING



Is the drain hose kinked or frozen?

YES → Repair drain hose

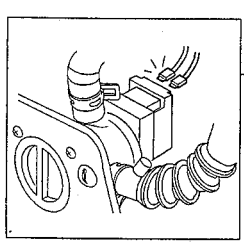
NO



Is the filter of drain pump clogged?

YES → Remove foreign material.

NO



Is the connector disconnected or is the contact bad?

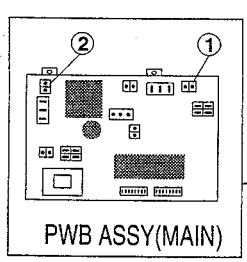
YES → Reconnect or repair the connector

NO

Is the coil of drain pump cut-off?
(resistance of coil is 90~160 Ω)

YES → Replace the pump assy

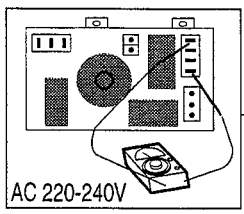
NO



When checking voltage between two receptacles as shown (①, ②) on spinning, is the voltage AC 220-240V ?

NO → Replace the PWB assy (Main)

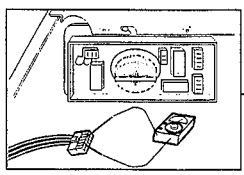
WASH HEATER TROUBLE



When checking the voltage between two receptacles of the PWB assy(Power) during washing.
Is the voltage AC 220-240V?

NO → Replace the PWB assy (Power)

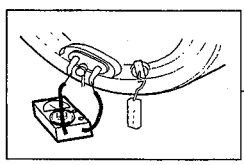
YES ↓



After power off, is the resistance between yellow wire and red wire of connector 10 to 30 Ω?

YES → Normal

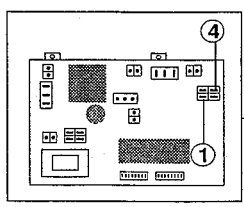
NO ↓



After power off, is the resistance of heater 10 to 30 Ω?

NO → Replace the heater assy

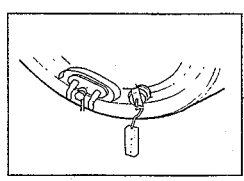
HEATING WATER CONTINUOUSLY ABOVE THE SELECTED WATER TEMPERATURE



Is the resistance between two receptacles with BL/WH (① ④) wires parted from PWB assy 2.5kΩ to 180kΩ (105℃~0℃)?

NO → Replace the thermistor (6322FR2046B)

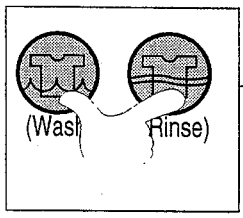
YES ↓



When checking thermistor on the tub cover, is the thermistor gotten more than 2 mm out of the rubber?

YES → Get the thermistor back to the rubber.

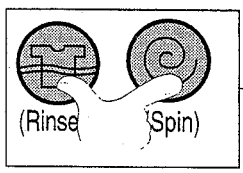
SPIN TROUBLE



Check the frequency of the water level 248 or more. The frequency can be checked by pressing the WASH ( ) and RINSE ( ) buttons at the same time on the program.

NO → Check the sensor (Pressure) or hose (Sensor). If the problem is on the sensor or the hose, replace the sensor or the hose.

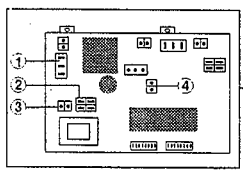
YES ↓



When pressing WASH( ), RINSE( ) and POWER( ) buttons at the same time after power off, press the START/PAUSE ( )button 2 times, is the drum low speed spin?

YES → Normal

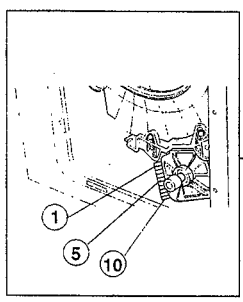
NO ↓



Is it disconnected or badly contacted? (Natural:3pin(①),Red:4pin(②),Red:2pin(③), Yellow:2pin(④))

YES → Reconnect or repair it.

NO ↓



Check the motor connector, is the resistance between the terminal in figure the same as below?

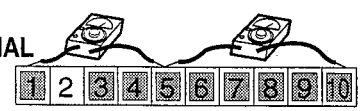
Resistance between terminals

①~⑤:0.5~1.0 Ω

⑤~⑩:1.5~2.5 Ω

Be sure to unplug the machine before measuring.

MOTOR TERMINAL



NO → Replace the motor assy. (4681FR1194A)

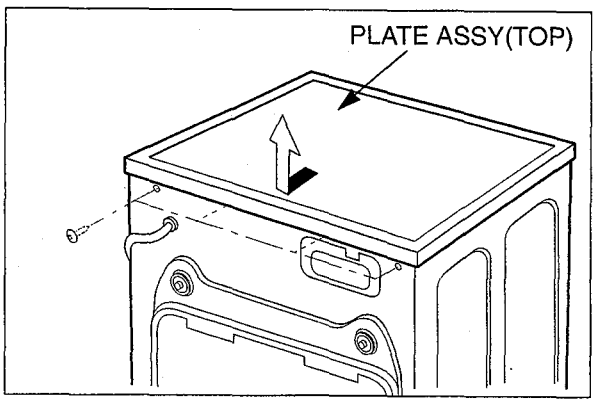
YES ↓

Replace the PWB assy (Main)

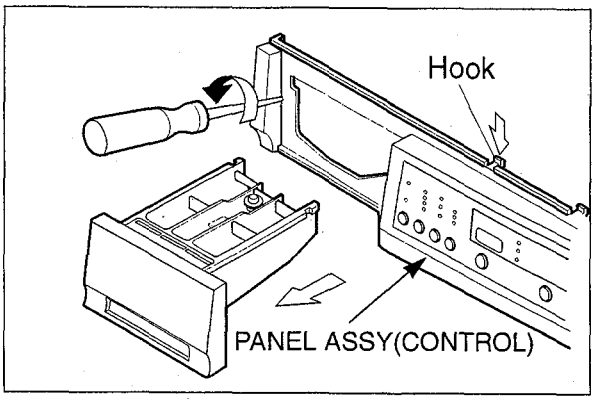
9. DISASSEMBLY INSTRUCTIONS

* Disassemble and repair the parts after pulling out power cord from the outlet

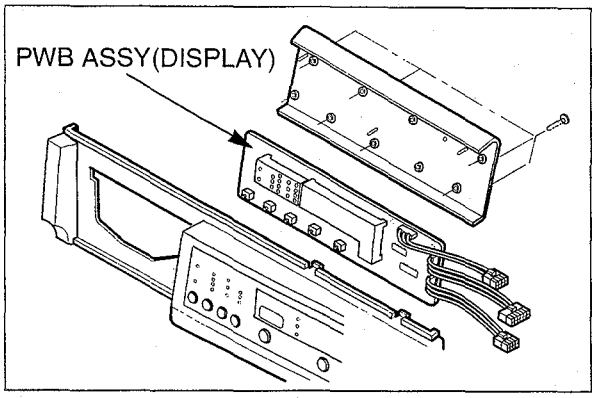
CONTROL PANEL



① Two screws are unscrewed on the top plate.
② The plate assy(Top) is pulled back and then upward to arrow direction.
③ The cover(Inner) is disassembled.

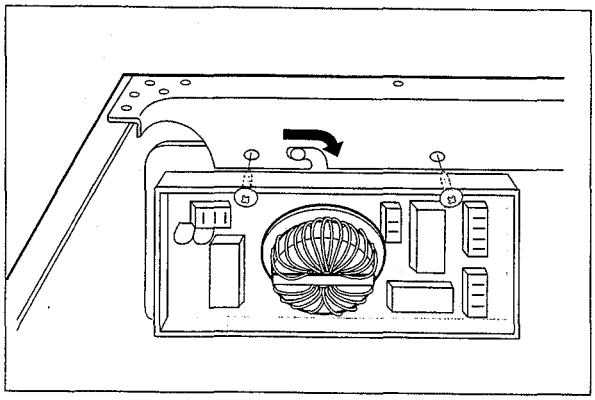


① The PWB assy(Display) connectors are disconnected.
② Pull out drawer, three screws are unscrewed.
③ Push three upper hooks and pull the control panel forward.



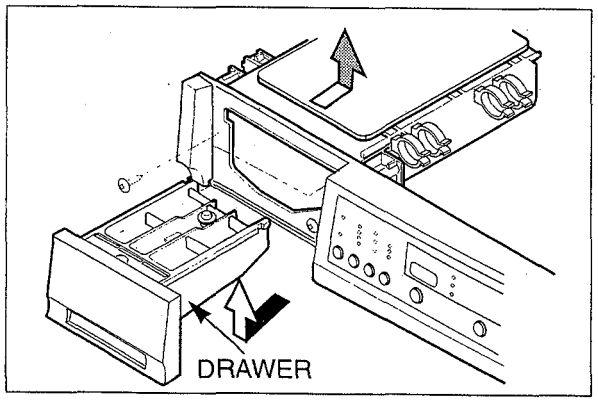
① The PWB assy(Display) is disconnected.
② When 9 screws are unscrewed on the PWB insulator and the PWB assy(Display) is disassembled from the PWB insulator.

PWB ASSY(POWER)

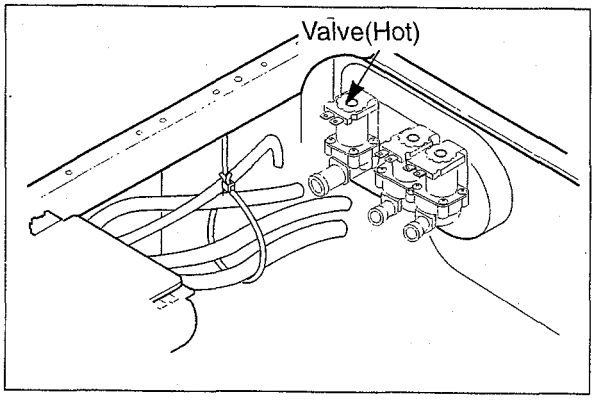


① Disassemble the top plate assy.
② Unscrew 2 screws.
③ Disconnect connector from the wiring.

DISPENSER ASSY

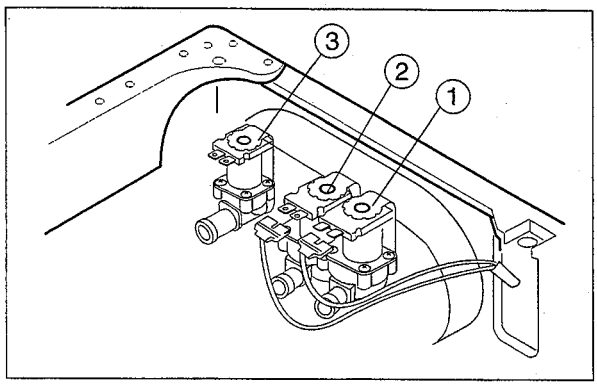


① The plate assy(Top)and the cover(Inner) are disassembled.
② Pull the drawer to arrow direction.
③ Two screws are unscrewed.



① The hose clamps and the hose are disassembled.
② The ventilation bellows and the water inlet bellows are disassembled on the tub.

INLET VALVE

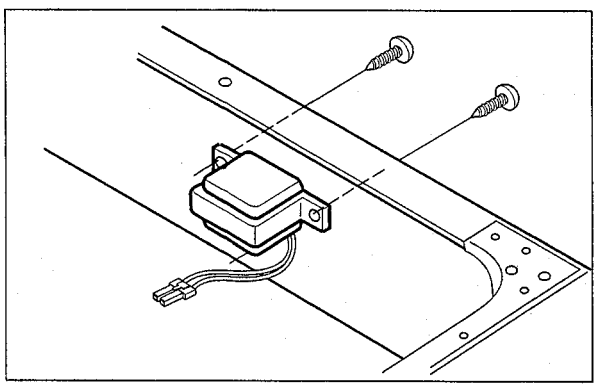


① Disconnect the wiring connector.
② Unscrew 2 screws from the back.

* When reconnecting the connector

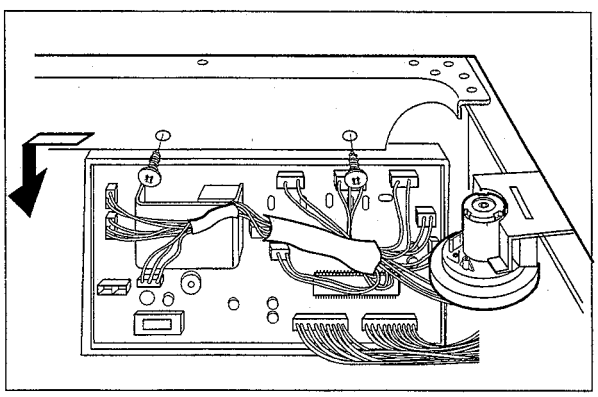
VALVE#1(MAIN)	White/Black -Black
VALVE#2(PRE)	Gray/White - Black
VALVE#3(HOT)	Blue/Red - Black

REACTOR



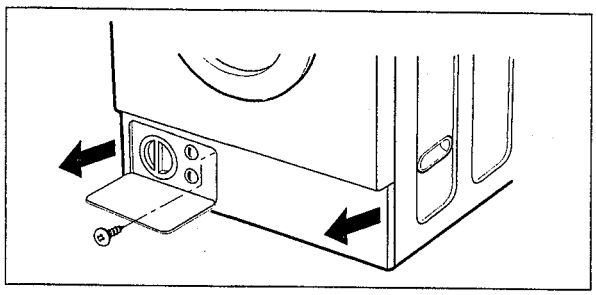
① Two screws are unscrewed.
② Disconnect the wiring connector from the PWB assy(Main).

PWB ASSY(MAIN)



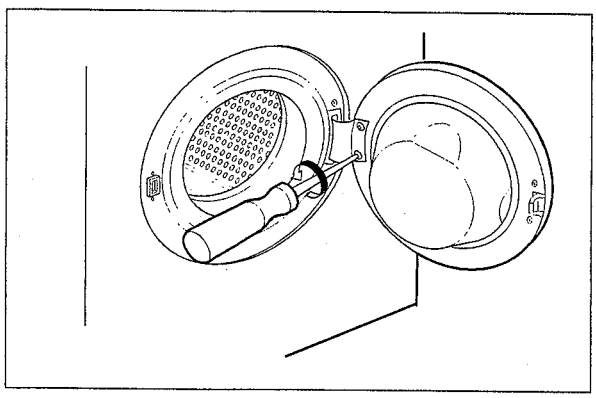
① Unscrew 2 screws
② Pill the PWB assy(Main) as shown.

LOWER COVER



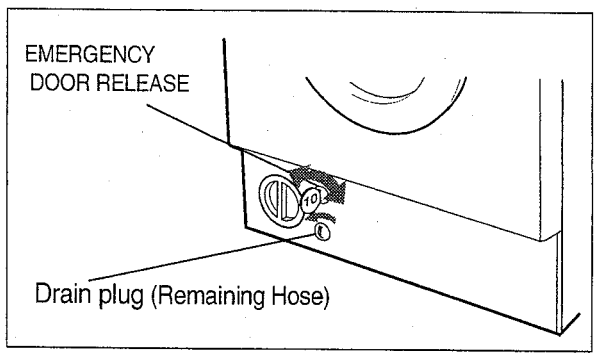
■ Open the lower cover cap by using coin and remove the lower cover to arrow direction after screw is unscrewed.

DOOR



※ When the power cord is plugged, the door can be opened by pushing the DOOR OPEN ( ) button

① Open the door completely.
② Remove the two screws from the hinge.



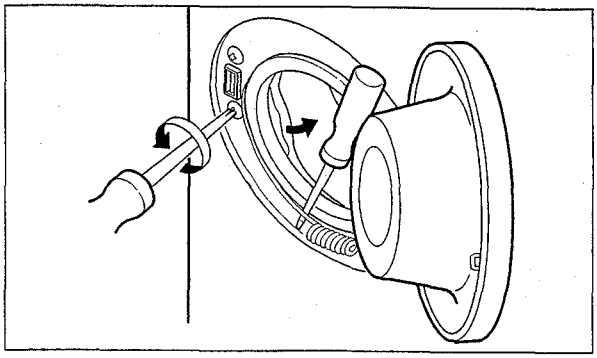
Door opening method in case of no electricity

① Rotate the emergency door release counterclockwise, by a coin.

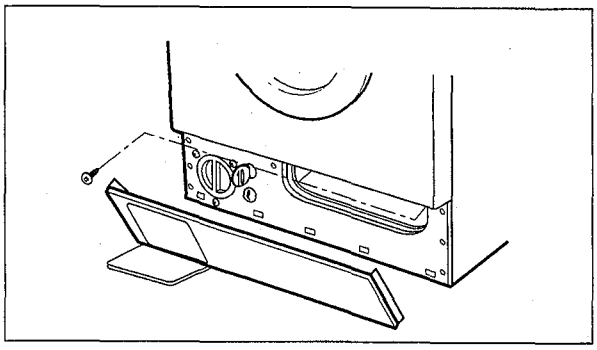
Removing method of remained water

① Rotate the drain plug (remaining hose) to arrow direction.
② Pull it out from hose.
※ First, prepare a bucket to put in the remained water

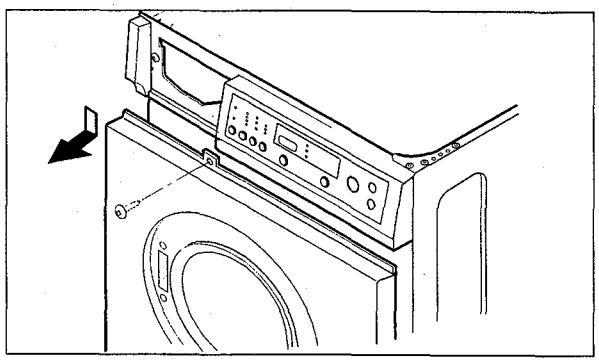
GASKET ASSY



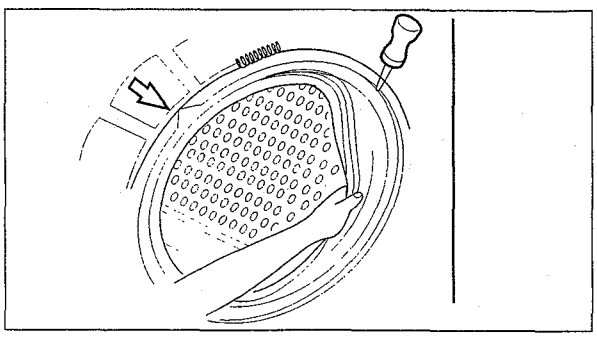
① The cabinet gasket clamp is released.
② Two screws are unscrewed from the cabinet cover.



① Screws are unscrewed from the lower cover.
② The lower cover is disassembled.

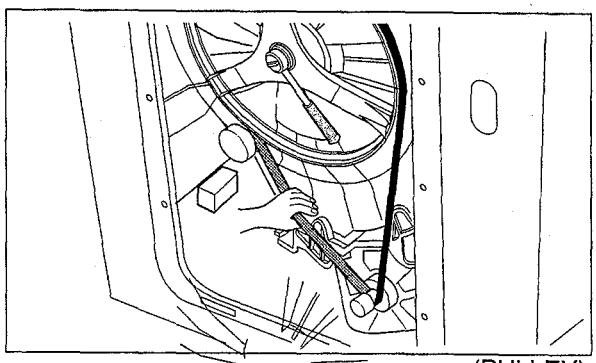


① The control panel is removed.
② Screw is unscrewed from the cabinet cover.



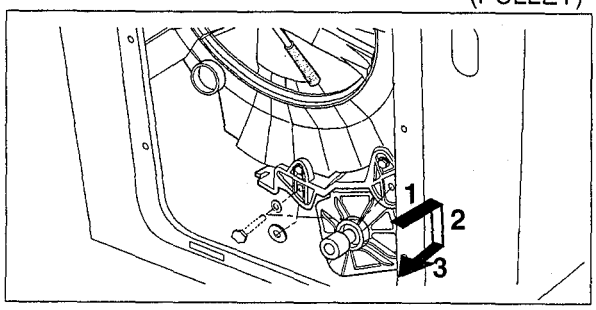
① Take apart the tub gasket clamp
② Make sure that the drain hole of the gasket is put beneath when reassembling the gasket.
※ Refer to the arrow mark on the tub cover.

PULLEY, MOTOR, DAMPER



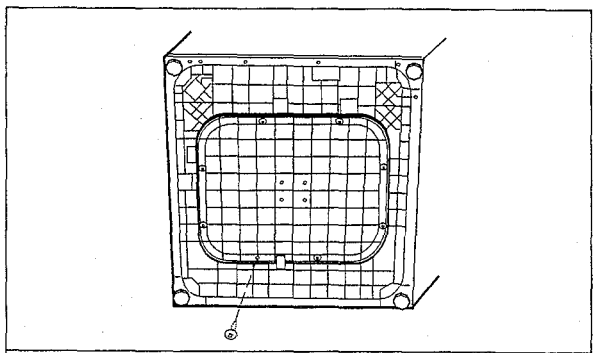
(PULLEY)

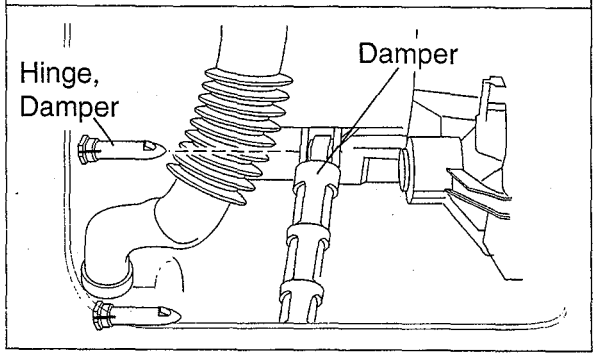
① The back cover is removed.
② The belt is pulled off while turning over the pulley.
③ The bolt is unscrewed to the shaft and then the pulley pulled off.



(MOTOR)

① Two screws are unscrewed from the bracket(Motor).
② The motor is pushed to arrow direction and then it is disassembled.
(When mounting the rubber should be fit the bracket holder<Motor>)



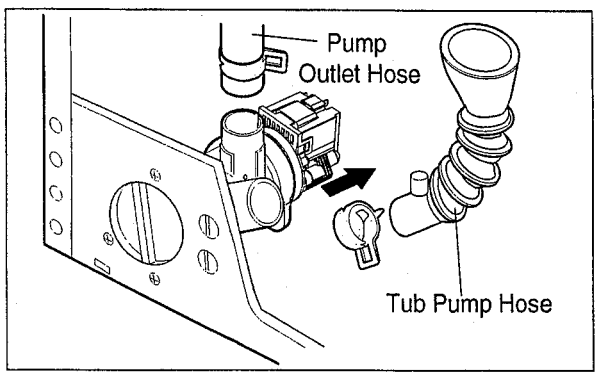


(DAMPER)

① Lay the washing machine.
② Six screws are unscrewed.

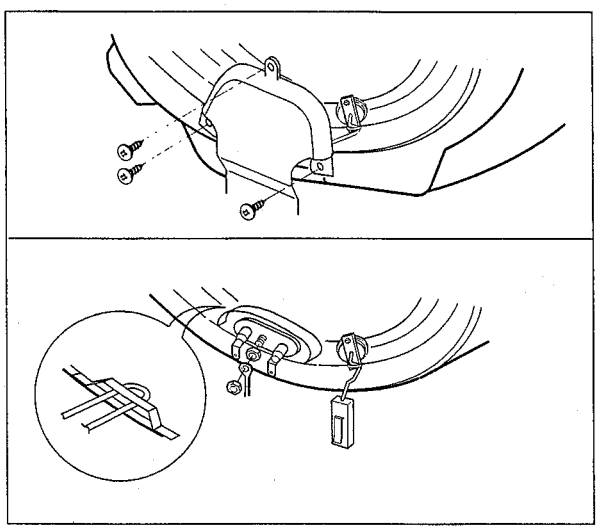
① The hinge(Damper) at the tub is pulled off pressing on the snaps at the sharp end.
② The hinge at the base is pulled off.

PUMP



① Remove the pump outlet hose.
② Remove the tub pump hose.
③ The pump connectors are disconnected, the hose is pulled off.
④ Three screws are unscrewed.
⑤ The pump is disassembled to arrow direction.

HEATER

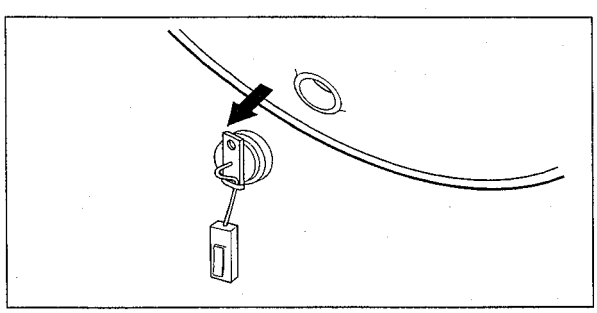


① Three screws are unscrewed.
② The heater M6 bolt is loosened and it is released through the tub cover.

CAUTION

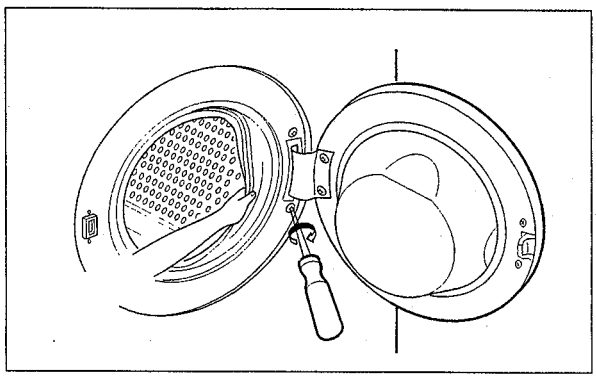
When mounting the heater, the heater should be inserted the heater clip on the bottom of the tub.

THERMISTOR



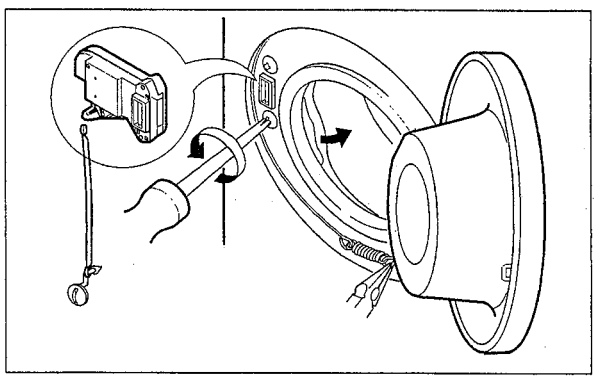
① Pull it out by holding the thermistor bracket.
* If holding the wire and pulling out it, it may be broken.
* The thermistor should be checked it is pulled to the rubber tightly.

DOOR HINGE ASSY



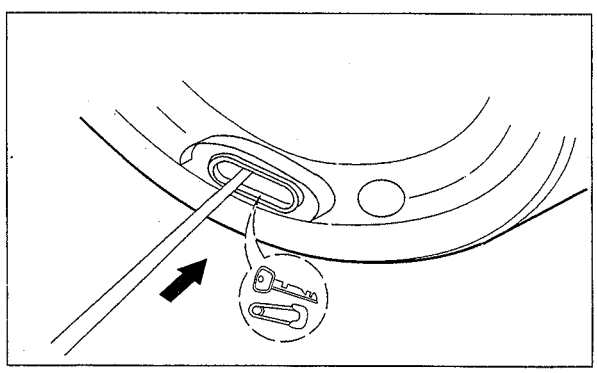
① Two screw are unscrewed on the door and the door is disassembled.
② The cabinet cover clamp is removed and the gasket is released.
③ Two screws are unscrewed on the door hinge.
④ The door hinge is disassembled by pushing the door hinge arm inside the cabinet cover.

SWITCH ASSY, DOOR LOCK



① The cabinet cover clamp is removed and the gasket is released.
② Two screws are unscrewed.
③ The Door Lock S/W is disconnected from the wiring connector and the strap.

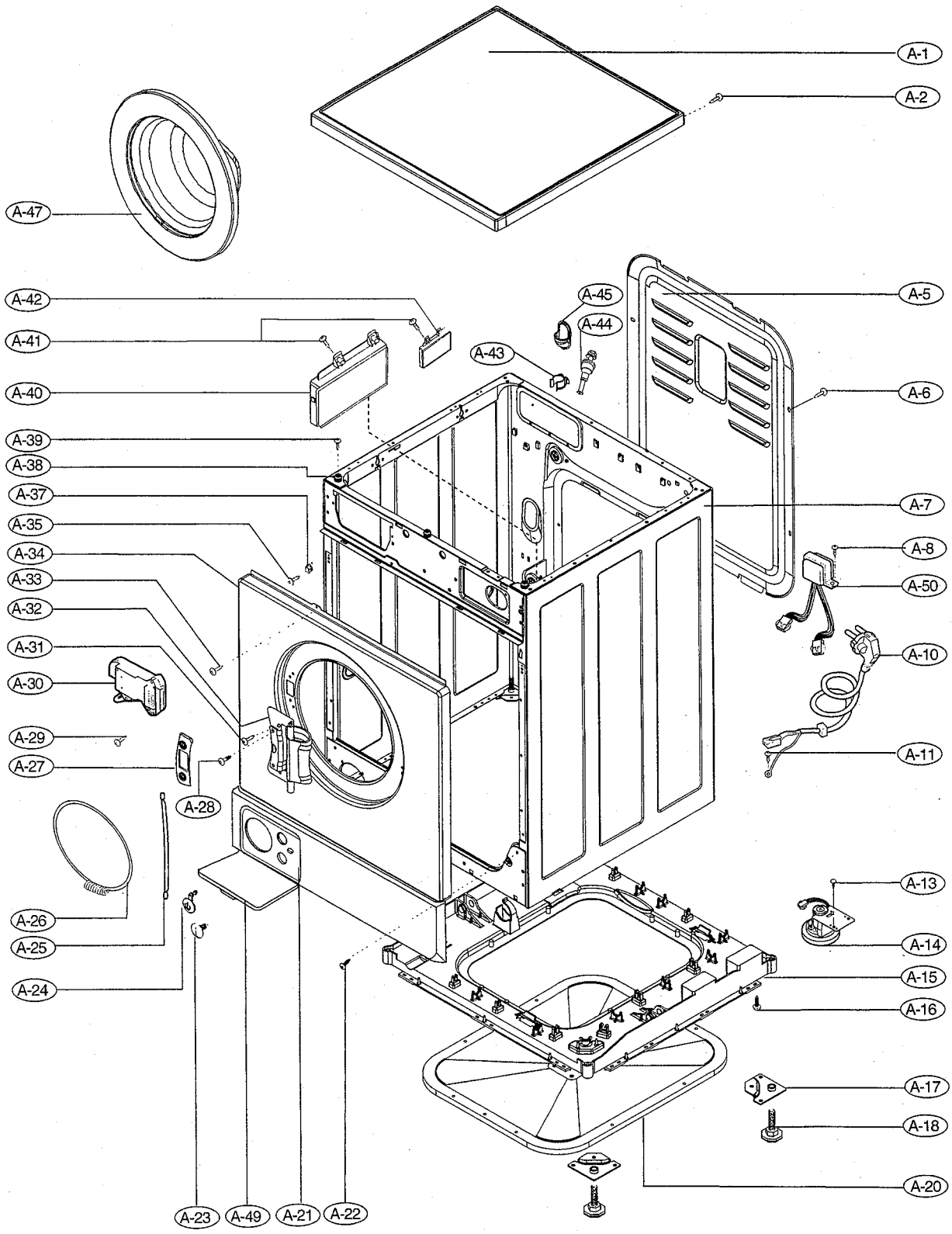
WHEN FOREIGN MATERIAL STACK BETWEEN DRUM AND TUB



① The heater is removed.
② The foreign material(wire, coin, etc) is removed by inserting the long bar in the hole.

10. EXPLODED VIEW AND PART LIST

10-1.THE PART LIST OF CABINET ASSY

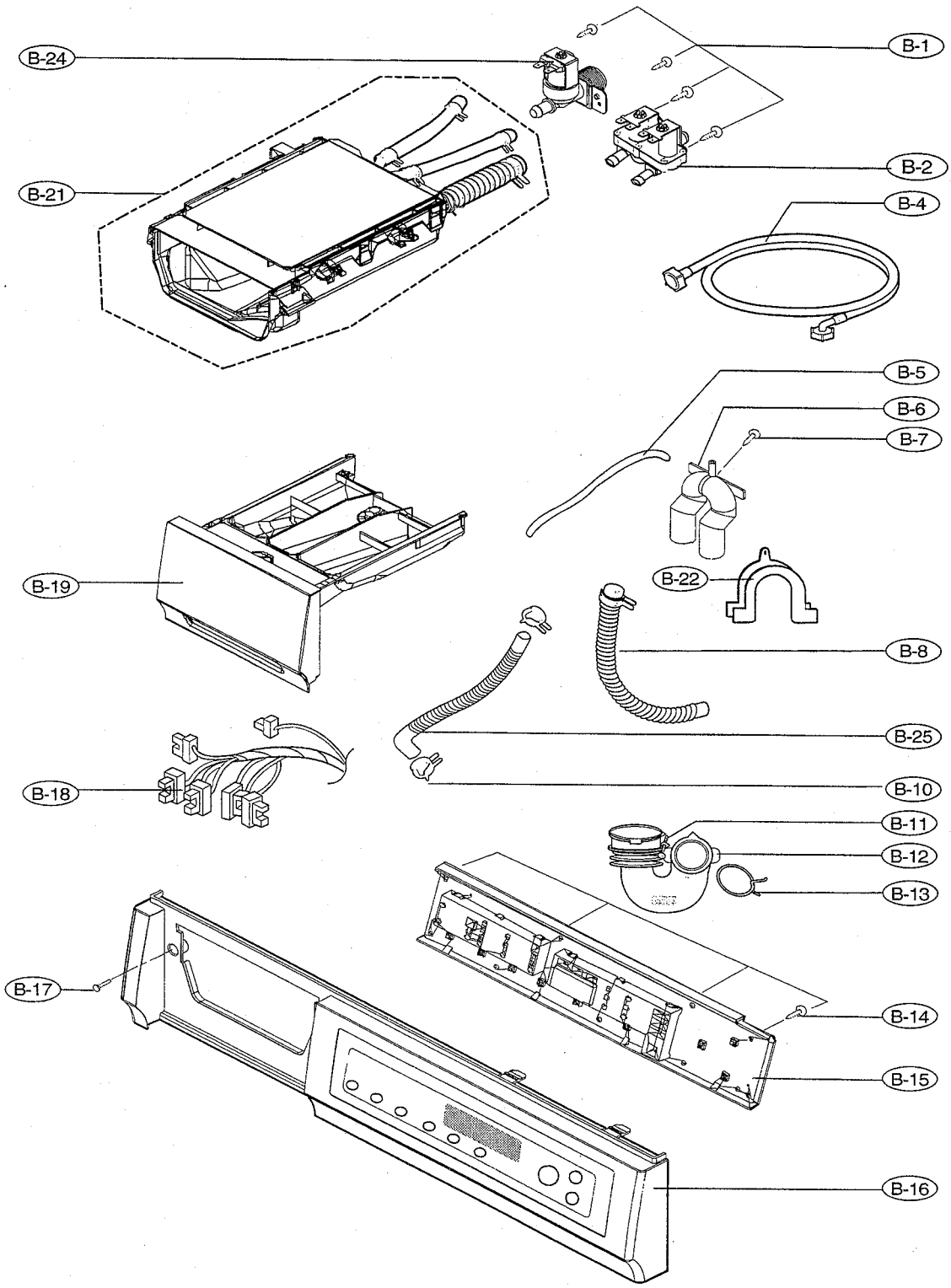


■ THE PART LIST OF CABINET ASSY

L/No.	PART NAME		PART NO.	SVC CORD	Q' TY	SPEC
A-1	PLATE ASSY(TOP)		3301ER1001A	R	1	
A-2	SCREW, TAPPING [TRUSS HEAD]		1TTL0403018			
A-5	BACK COVER		3808FR1202A		1	
A-6	SCREW, TAPPING [TRUSS HEAD]		1TTG0402618		4	
A-7	CABINET ASSY	WD-102(4)1WF/WD-102(4)2X	3901FR0045A		1	Cold
		WD-102(4)1WFH/WD-102(4)2XH	3901FR0045D		1	Cold/Hot
A-8	SCREW, TAP TITE(S) [BINDING HEAD]		1SBF0402418			
A-10	POWER CORD ASSY *See Appendix(type of power cord)		6411FR1169B		1	C-4-2
			6411FR1169D		1	S-2-1
			6411FR1169E		1	B-5
			6411FR1169F		1	B-3
			6411FR1169K	R	1	B-3(BSI)
			6411FR1169L		1	B-3(SISIR)
			6411FR1169N		1	C-4-2
			6411FR1169P		1	S-2-3
			6411FR1169Q		1	S-2-1
A-11	SCREW		4000W4A003A		1	
A-13	SCREW, TAP TITE(S) [BINDING HEAD]		1SBF0402618		1	
A-14	SENSOR PRESSURE		6600FR1203E	R	1	
			6600FR1203F		1	SEMKO
A-15	BASE		3040FR0049C		1	
A-16	SCREW, TAPPING [TRUSS HEAD]		1TTG0403018		24	
A-17	BRACKET, BASE		4810FR4136A		4	
A-18	FEET ASSY		5413FR4154A	R	4	
A-20	COVER, SILENT		3550FR1151A		1	
A-21	COVER, LOWER		3550FR1166A	R	1	
A-22	SCREW, TAPPING [TRUSS HEAD]		1TTG0402618		3	
A-23	CAP(REMAINING HOSE)		5006FR3146A		1	
A-24	OPENER, DOOR		5870FR3147A		1	
A-25	STRAP		4640FR4118A		1	
A-26	CLAMP ASSY, CABINET GASKET		2W20017A		1	

L/No.	PART NAME		PART NO.	SVC CORD	Q' TY	SPEC
A-27	GUIDE		4974FR4145A		1	
A-28	SCREW		4000FD4191A		2	
A-29	SCREW, TAPPING[TRUSS HEAD]		1TTL0403032		2	
A-30	SWITCH ASSY, DOOR LOCK		6601FR1119C	R	1	220-240VAC
			6601FR1262A		1	220-240VAC (EMZ)
A-31	SCREW		4000FD4191A		2	
A-32	HINGE ASSY		4775FR2114A		1	
A-33	SCREW, TAPPING[TRUSS HEAD]		1TTL0403032		1	
A-34	COVER, CABINET		3550FR1213A		1	
A-35	SCREW, TAPPING [PAN HEAD]		1TPL0402618		4	
A-37	HOLDER		4930FR4157A		2	
A-38	HOLDER		4930ER4001A		3	
A-39	SCREW, TAP TITE(S)[PAN HEAD]		1SCPF040327		3	
A-40	PWB ASSY(MAIN)	WD-102(4)WF/WD-102(4)2X	6871FC1004A	R	1	220-240VAC
		WD-102(4)WFH/WD-102(4)2XH	6871FC1004B		1	220-240VAC
A-41	SCREW TAPPING [TRUSS HEAD]		1TTL0403018		3	
A-42	PWB ASSY (POWER)		6871FC2262C	R	1	220-240VAC
A-43	HOLDER		4930FR3151A		1	
A-44	BOLT ASSY, TRANSIT		4011FR3159A		4	
A-45	BUSHING		4830FR3107A		1	
A-47	DOOR ASSY		3581FR1200C	R	1	
A-49	LOWER COVER CAP		5006FR3179A	R	1	
A-50	REACTOR		5874FA2381B	R	1	220-240VAC

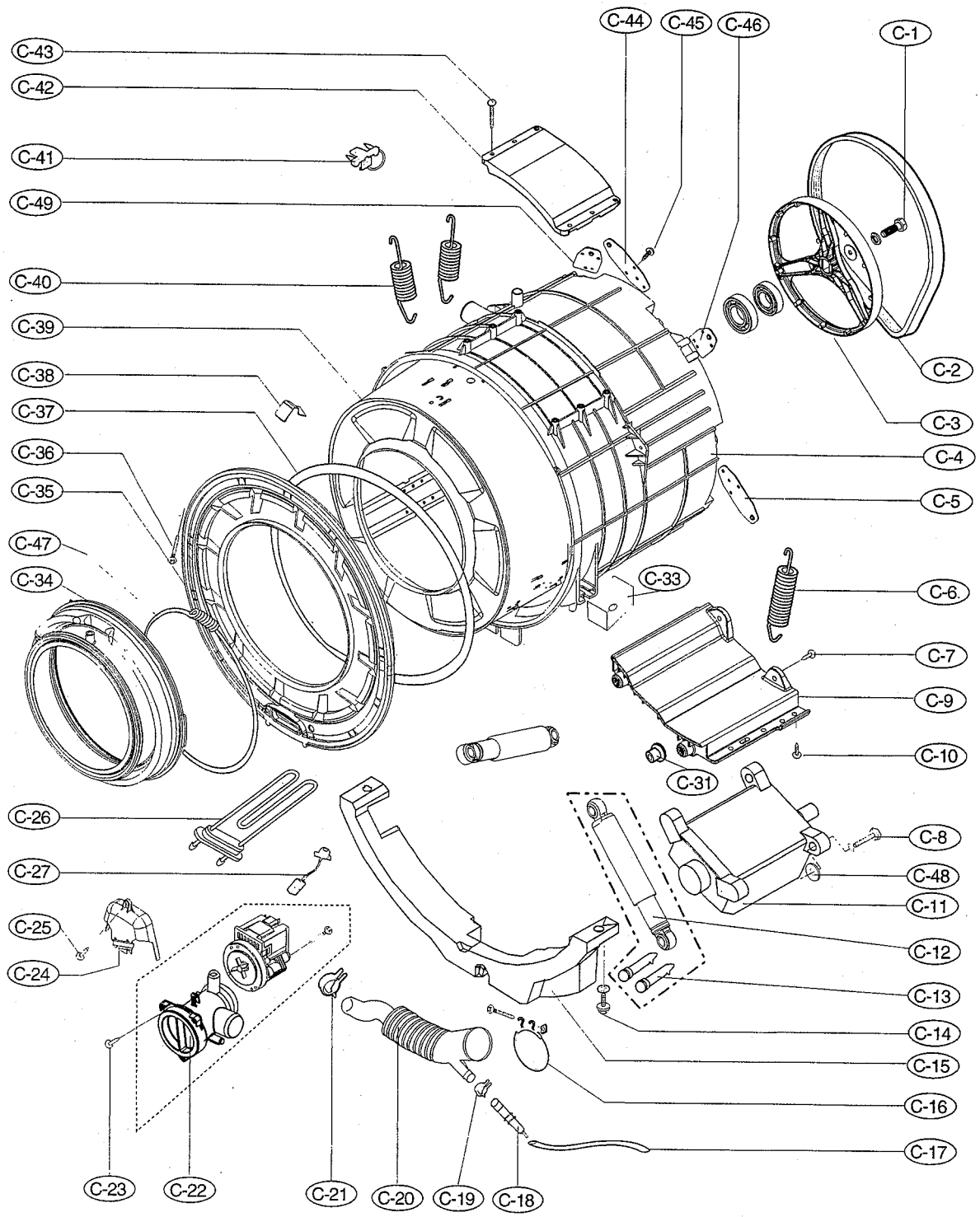
10-2 THE EXPLODED VIEW OF CONTROL PANEL & DISPENSER ASSY



■ THE PARTS LIST OF CONTROL PANEL & DISPENSER ASSY

L/No.	PART NAME		PART NO.	SVC CORD	Q' TY	SPEC
B-1	SCREW, MACHINE [PAN HEAD]		1SBF0402618			
B-2	VALVE		5220FR2067A	R	1	220-240VAC
			5220FR1251A		1	220-240VAC (SEMKO)
B-4	HOSE ASSY, INLET		5214FA1146	R	1	
			5215FD3715		1	VDE(IMQ)
			3W40102		1	VDE(IMQ)
B-5	HOSE		5214FR4125B		1	
B-6	CONNECTOR (MECH), DRAIN HOSE		4932FR3156A		1	
B-7	SCREW, TAPPING [TRUSS HEAD]		1TTG0402618		1	
B-8	HOSE ASSY, DRAIN		5214FR3188A	R	1	
B-10	CLAMP		4861FR3068C		2	
B-11	CLAMP		4860FR3092D		1	
B-12	BELLOWS		4738FR2065A	R	1	
B-13	RING, SNAP		3W500120		1	
B-14	SCREW		4W51132A		9	
B-15	PWB ASSY(DISPLAY)		6871FC2272E	R	1	
B-16	PANEL ASSY, CONTROL	WD-1021WF(H)/WD-1022X(H)	3721FR1227	R	1	
		WD-1041WF(H)/WD-1042X(H)	3721FR1196		1	
B-17	SCREW, TAPPING [TRUSS HEAD]		1TTL0403532			
B-18	LEAD WIRE ASSY		6877ER1001A	R	1	SEMKO
			6877ER1001B		1	SEMKO(HOT)
			6871ER1001E		1	
B-19	PANEL ASSY, DRAWER	WD-1021WF(H)/WD-1022X(H)	3721ER1001	R	1	
		WD-1041WF(H)/WD-1042X(H)	3721FR1244		1	
B-21	DISPENSER ASSY		4925FR1137F	R	1	SHOWER
			4925FR1137G		1	HEATING
B-22	DRAIN HOSE HANGER		3W50712A		1	
B-24	VALVE		5220FR1280A	R	1	220-240VAC (HEATING)
B-25	HOSE, PUMP		5214FR3188A		1	

10-3 THE EXPLODED VIEW OF DRUM & TUB ASSY

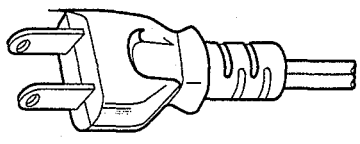
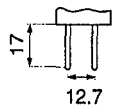
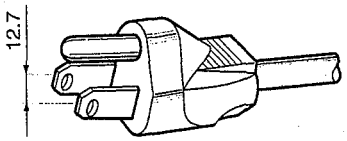
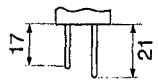
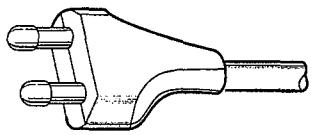
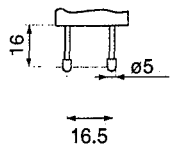
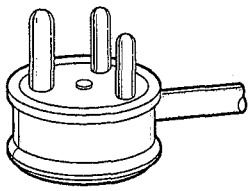
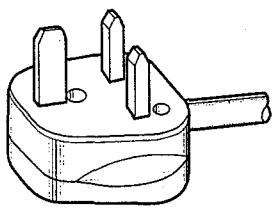
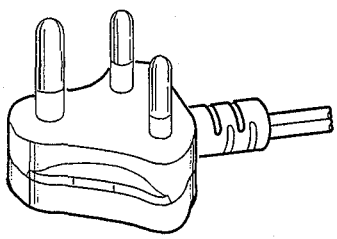
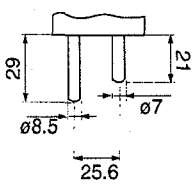
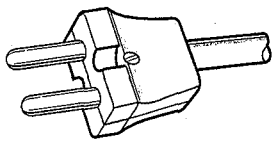
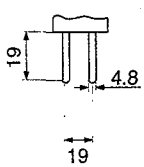


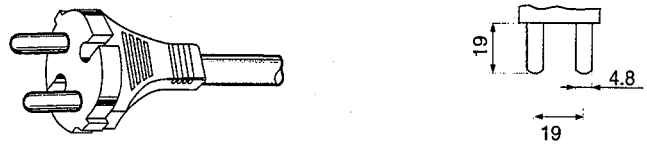
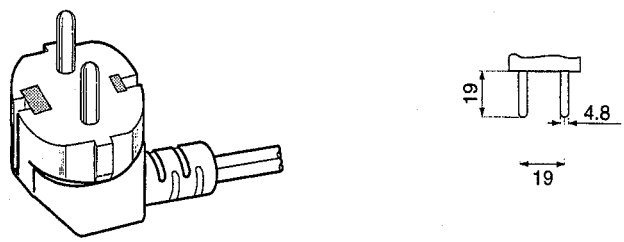
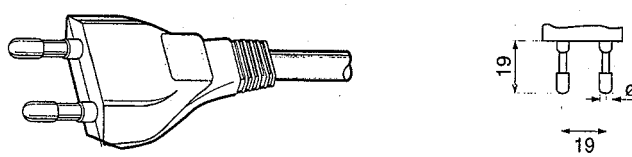
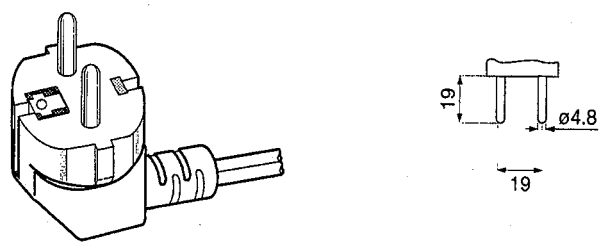
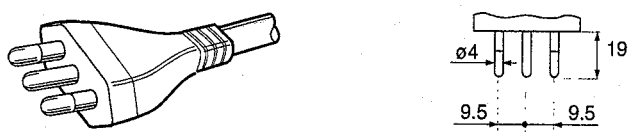
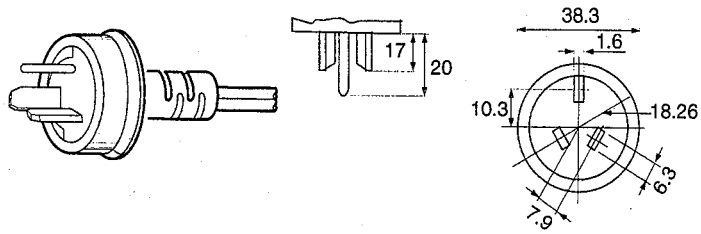
■ THE PART LIST OF DRUM & TUB ASSY

L/No.	PART NAME	PART NO.	SVC CORD	Q' TY	SPEC
C-1	BOLT ASSY	4011FR3173A		1	
C-2	BELT, POLY-V	4400FR3116A	R	1	
C-3	PULLEY	4560FR1149A	R	1	
C-4	TUB ASSY	3045FR0031C		1	
C-5	BRACKET	4810FR4167A		1	
C-6	SPRING	4970FR2084B	R	1	
C-7	SCREW	1SZZFA4362A		2	
C-8	SCREW	1SZZFA4362A		2	
C-9	BRACKET, MOTOR	4810FR1222		1	
C-10	SCREW	1SZZFA4362A		4	
C-11	MOTOR ASSY	4681FR1194A	R	1	220-240VDC
C-12	DAMPER ASSY	4901FR2080A	R	2	
C-13	HINGE	4774FR3118A	R	4	
C-14	BOLT ASSY	4011FR3173B		3	
C-15	WEIGHT, BALANCE LOWER	4844FR1179A		1	
C-16	CLAMP	4860FR3092C		1	
C-17	HOSE(SENSOR)	5214FR4125J	R	1	
C-18	CHAMBER, AIR	3504FR3134A	R	1	
C-19	CLAMP, HOSE	4861FR3068C		3	
C-20	BELLOWS	4738FR1145A	R	1	
C-21	CLAMP, HOSE	4861FR3068E		1	
C-22	PUMP ASSY(DRAIN)	3859FR1225E	R	1	220-240VAC/50Hz
C-23	SCREW, TAPPING [TURSS HEAD]	1TTL0403018		3	
C-24	PROTECTOR (MECH)	3740FR3043A		1	
C-25	SCREW, TAPPING [TURSS HEAD]	1TTL0403318		3	
C-26	HEATER ASSY	5301FR1158A	R	1	220VAC2500W
		5301FR1158B		1	240VAC2000W
		5301FR1158C		1	220VAC2000W
		5301FR1158D		1	230VAC2000W

L/No.	PART NAME	PART NO.	SVC CORD	Q' TY	SPEC
C-27	THERMISTOR	6322FR2046B	R	1	
C-31	RUBBER	5040FR4168B		4	
C-33	BRACKET	4810FR4116A		3	
C-34	GASKET	4987FR1165A	R	1	
C-35	COVER, TUB	3044FR0027A		1	
C-36	SCREW, TAPPING [TURSS HEAD]	1TTL0403318		3	
C-37	SEAL	4036FR4123A		1	
C-38	CLAMP, TUB	4860FR4124A		11	
C-39	TUB, DRUM ASSY	3044FR1220D		1	
C-40	SPRING	4970FR2084A	R	2	
C-41	HOLDER(SPRING)	4930FR3040A		3	
C-42	WEIGHT, BALANCE UPPER	4844FR1223A		1	
C-43	SCREW	1SZZFA4362A		6	
C-44	BRACKET RIGHT	4810FR4166A		1	
C-45	SCREW	1TTL0503318		12	
C-46	BRACKET UPPER LEFT	4810FR4126A		2	
C-47	TUB GASKET CLAMP ASSY	4861ER2001A	R	1	
C-49	BRACKET UPPER RIGHT	4180FR4126B		1	
C-50	SCREW	4W51132A		3	

■ APPENDIX(The type of power cord)

TYPE	TYPE OF PLUG	POWER CORD P/No.
A-1	 	-
A-2	 	-
B-1	 	-
B-2		2A 2PIN 3.5Ø EPIN 5Ø 5A 2PIN 5Ø EPIN 7Ø 15A 2PIN 7Ø EPIN 8.6Ø	-
B-3		6411FR1169F
B-5	 	6411FR1169E
C-1	 	-

TYPE	TYPE OF PLUG	POWER CORD P/No.
C-2-1		-
C-2-2		6411FD1096V
C-3-1		-
C-3-2		-
C-4-2		6411FR1169B 6411FR1169N
C-5		-
S-2-1		6411FR1169D 6411FR1169P 6411FR1169Q